

Claims

1. A method of optimizing the compression efficiency in a packet data communication where a compression history of previous packets is used for the compression of a current packet, the method comprising:

updating the compression history selectively, wherein selection is performed based on a first algorithm for determining whether a packet shall be compressed, and on a second algorithm for determining whether a compressed packet shall be used for an update of the compression history.

2. The method according to claim 1, further comprising:

ensuring a history consistency between a compressor and a decompressor is by using Transmission Control Protocol, wherein the compressor monitors an acknowledgment signaling of a Transmission Control Protocol receiving means.

3. The method according to claim 1, further comprising:

ensuring a history consistency between a compressor and a decompressor by using a feedback between the compressor and the decompressor.

4. The method according to claim 2, further comprising:

enabling the compressor to safely infer a subset of a first context at the decompressor by monitoring the Transmission Control Protocol acknowledgment signaling, wherein the subset is used as a second context for compression.

5. The method according to claim 1, further comprising:

ensuring a history consistency between a compressor and a decompressor by combining use of Transmission Control Protocol, wherein the compressor monitors an acknowledgment signaling of a Transmission Control Protocol receiving means, with use of a feedback between the compressor and the decompressor.

6. A method of optimizing compression efficiency in a packet data communication where a compression history of previous packets is used for compression of a current packet, the method comprising:

- using a first algorithm in conjunction with a compressing device to decide if the current packet should be compressed;

- using a second algorithm in conjunction with the compressing device to decide which packets out of packets sent compressed are to be used to update a buffer of the compressing device;

- signaling from the compressing device to a decompressing device such that the decompressing device knows which of the packets out of the packets sent are to be included in the compression history; and

- using the decompressing device and a packet sequence number assigned by a compressor to update a buffer thereof in synchronization with the compressing device.

7. The method according to claim 6, further comprising:

- ensuring a history consistency between the compressing device and the decompressing device by using Transmission Control Protocol, wherein the compressing device monitors an acknowledgment signaling of a Transmission Control Protocol receiving means.

8. The method according to claim 7, further comprising:

enabling the compressing device to safely infer a subset of a first context at the decompressing device by monitoring the Transmission Control Protocol acknowledgment signaling, wherein the subset is used as a second context for compression.

9. The method according to claim 6, further comprising:

ensuring a history consistency between the compressing device and the decompressing device by using a feedback between the compressing device and the decompressing device.

10. The method according to claim 6, further comprising:

ensuring a history consistency between the compressing device and the decompressing device by combining use of Transmission Control Protocol, wherein the compressing device monitors an acknowledgment signaling of a Transmission Control Protocol receiving means, with use of a feedback between the compressing device and the decompressing device.

11. A compression device for optimizing compression efficiency in a packet data communication where a compression history of previous packets is used for compression of a current packet, the device comprising:

updating means for updating the compression history selectively, the updating means having implemented and processing a first algorithm related to whether a packet shall be compressed, and a second algorithm related to whether a compressed packet shall be used for an update of the compression history; and

storing means, operably connected to the updating means, for storing the compression history.

12. The device according to claim 11, further comprising monitoring means for monitoring an acknowledgment signaling of a Transmission Control Protocol receiving means, wherein the monitoring means is operably connected to the updating means.

13. The device according to claim 12, wherein said monitoring means is adapted to be enabled to safely infer a subset of a first context at a decompressor by monitoring Transmission Control Protocol acknowledgment signaling, wherein the subset is used as a second context for compression.

14. The device according to claim 11, further comprising establishing means for establishing a feedback between the compression device and a decompression device, wherein the establishing means is operably connected to the updating means.

15. A compression device for optimizing compression efficiency in a packet data communication where a compression history of previous packets is used for compression of a current packet, the device comprising:

signaling means for signaling to a decompression device which of a first set of packets are to be included in the compression history, the signaling means having implemented and processing a first algorithm used to decide if the current packet should be compressed;

buffer means, operably connected to the signaling means, for storing the compression history; and

processing means for having implemented and processing a second algorithm, wherein the second algorithm is used to determine which of a second set of packets out of a third set of packets sent compressed are to be used to update the buffer means, wherein the processing means is operably connected to the signaling means.

16. The device according to claim 15, further comprising means for monitoring an acknowledgment signaling of a Transmission Control Protocol receiving means, wherein the monitoring means is operably connected to the signaling means.

17. The device according to claim 16, wherein the monitoring means is adapted to be enabled to safely infer a subset of a first context at a decompressor by monitoring a Transmission Control Protocol acknowledgment signaling, wherein the subset is used as a second context for compression.

18. The device according to claim 15, further comprising establishing means for establishing a feedback between the compression device and a decompression device, wherein the establishing means is operably connected to the signaling means.

19. A decompression device for optimizing compression efficiency in a packet data communication where a compression history of previous packets is used for compression of a current packet, the device comprising:

receiving means for receiving signals from a compression device indicating which packets are to be included in the compression history;

buffer means, operably connected to the receiving means, for storing the compression history; and

processing means for processing a packet sequence number for updating the buffer means in synchronization with the compression device, wherein the processing means is operably connected to the receiving means.

20. The device according to claim 19, further comprising forwarding means for forwarding an acknowledgment signaling of a Transmission Control Protocol receiving means to the compression device, wherein the forwarding means is operably connected to the receiving means.

21. The device according to claim 19, further comprising establishing means for establishing a feedback between the compression device and the decompression device, wherein the establishing means is operably connected to the receiving means.

22. A compression device for optimizing compression efficiency in a packet data communication where a compression history of previous packets is used for compression of a current packet, the device comprising:

- a processor configured to allow for updating the compression history selectively, the processor having implemented and processing a first algorithm related to whether a packet shall be compressed, and a second algorithm related to whether a compressed packet shall be used for an update of the compression history; and

- a memory unit, operably connected to the processor, for storing the compression history.

23. A compression device for optimizing compression efficiency in a packet data communication where a compression history of previous packets is used for compression of a current packet, the device comprising:

- a signaling unit configured to signal a decompression device which of a first set of packets are to be included in the compression history, the signaling unit having implemented and processing a first algorithm used to decide if the current packet should be compressed;

- a buffer, operably connected to the signaling unit, configured to store

the compression history; and

a processor configured to have implemented and to process a second algorithm, wherein the second algorithm is used to determine which of a second set of packets out of a third set of packets sent compressed are to be used to update the buffer, wherein processor is operably connected to the means for signaling.

24. A decompression device for optimizing compression efficiency in a packet data communication where a compression history of previous packets is used for compression of a current packet, the device comprising:

a receiver configured to receive signals from a compression device indicating which packets are to be included in the compression history;

a buffer, operably connected to the receiver, configured to store the compression history; and

a processor configured to process a packet sequence number for updating the buffer in synchronization with the compression device, wherein the processor is operably connected to the receiver.